

### **REMARKS**

This is a timely reply to the non-final Office Action of August 25, 2003. In that non-final Office Action, the Examiner allows Claims 31 – 43. The Examiner also indicates that Claims 7-22 and 24 – 30 are allowable, but objects to these claims since they depend upon rejected base claims. Finally, the Examiner rejects Claims 1 – 6 and 23. The grounds for rejection of Claims 1 - 6 and 23 are traversed below.

#### **Claim Amendments**

Claim 43 has been amended to insert an “and” before the last clause in the claim. The Applicant submits that this amendment is merely to improve the grammar of the claim and does not change the scope of the claim.

Claim 4 has been amended to be made dependent on Claim 2 rather than Claim 1, as discussed below. The Applicant submits that this amendment is supported by Claim 4 as originally filed and, therefore, does not add new matter to the application

New Claim 44 has been added to the application. The Applicant submits that new Claim 44 is supported in the specification at page 7, lines 1 - 14. Therefore, the Applicant submits that this amendment does not add new matter to the application and may be properly entered.

#### **Claim Rejection - 35 U.S.C. § 112**

In section 3, the Examiner rejects Claim 4 under 35 U.S.C. 112, second paragraph based on the recitation of “the array of optical apertures.” The Examiner asserts that there is no antecedent basis for the recitation of this element. Claim 4 has been amended to be made dependent on Claim 2, which the Applicant submits provides the proper antecedent basis for the recitation of “the array of optical apertures” in Claim 4. Therefore, the Applicant submits that the rejection of Claim 4 under 35 U.S.C. 112 has been overcome by this amendment.

#### **Claim Rejection - 35 U.S.C. § 102 based on Keene**

In Section 5 of the Office Action, the Examiner rejects Claims 1 - 4 and 23 under 35 U.S.C. 102(b) as being anticipated by Keene et al. (U.S. Patent 4,813,766). The Applicant thanks the Examiner for his comments regarding Keene in relation to the features recited in the rejected

claims. However, the Applicant respectfully submits that the Examiner has not shown that Keene teaches each and every element as recited in the rejected claims.

Regarding Claim 1, the Examiner asserts that Keene teaches a “controllable delay structure 32 providing selectable delay for each optical output pulse stream (see Figs. 8A-8C) with a controllable delay relative to the input.” However, the Applicant notes that Claim 1 recites, in part, “a controllable optical delay structure coupled to the optical pulse source . . . each output optical pulse stream having a controllable time delay relative to the input optical pulse stream.” The Applicant submits that the Examiner has not shown where Keene teaches, discloses or suggests “a controllable time delay” as recited in Claim 1.

The Applicant notes that the Examiner has characterized the time delay provided as a “selectable delay.” The selectability of the time delay provided by the apparatus disclosed by Keene is shown in Figure 2. Essentially, by using switchable polarization rotators, the light beam can be switched to a shorter path 29 or a longer path 28a, 28b, 28c. Therefore, the apparatus shown in Figure 2 merely selects a first delay or a second delay by selecting the path which the light beam travels.

Figures 8A - 8C, cited by the Examiner, also show that Keene merely discloses the different time delays can be selected. A first delay may be selected as  $t_1$  as shown in Figure 8B and a second delay may be selected as  $t_2$  as shown in Figure 8C. As described earlier in Keene, these selectable delays  $t_1$ ,  $t_2$  are provided by essentially just selecting different length optical paths. Therefore, as properly characterized by the Examiner, Keene merely teaches an apparatus in which different delays may be selected.

On the other hand, Claim 1 recites, in part, “a controllable optical delay structure . . . each output optical pulse stream having a controllable time delay.” The Applicant submits that the Examiner has not shown that Keene teaches “a controllable time delay.” Further, the Applicant submits that there is a patentable difference between the “selectable” time delays taught by Keene and the “controllable time delay” as claimed in Claim 1. Therefore, the Applicant submits that Claim 1 is patentable over Keene and request that the rejection of Claim 1 under 35 U.S.C. 102 based on Keene be withdrawn.

Regarding Claims 2 and 3, the Applicant submits that the rejection of these claims should be withdrawn at least based upon their dependence, directly or indirectly, on Claim 1.

Regarding Claim 4 (as amended), the Applicant submits that the rejection of these claims should be withdrawn at least based upon their indirect dependence on Claim 1. Further, the Examiner merely states that "the output streams are beam-steered across subapertures."

However, the Applicant notes that Claim 4 recites "a wavefront compensator integrated with the array of optical apertures." Therefore, the Applicant submits that the Examiner has not shown where Keene teaches, discusses, or suggests each and every element as set forth in Claim 4. If the Examiner disagrees, he is respectfully requested to specifically point out and clearly explain where Keene discloses all of the elements as set forth in this claim. Otherwise, the Applicant requests that the rejection of Claim 4, as amended, based on Keene be withdrawn.

Regarding Claim 23, as similarly discussed above for Claim 1, the Applicant submits that the Examiner has not shown that Keene discloses "a controllable time delay" as recited in Claim 23. If the Examiner disagrees, he is respectfully requested to specifically point out and clearly explain where Keene discloses this feature as set forth in Claim 1. Otherwise, the Applicant requests that the rejection of Claim 1 based on Keene be withdrawn.

#### **Claim Rejection - 35 U.S.C. § 103 based on Keene**

In Section 7 of the Office Action, the Examiner rejects Claims 5 and 6 under 35 U.S.C. 103 as being made obvious by Keene. As discussed above, the Applicant submits that the Examiner has not shown that Keene discloses each and every element as set forth in Claim 1. Therefore, the Applicant submits that the rejection of Claims 5 and 6 should be withdrawn at least based upon their dependence, either directly or indirectly, on Claim 1.

#### **New Claim 44**

The Applicant submits that new Claim 44 is patentable over Keene at least based upon its dependence on Claim 1. The Applicant further submits that Claim 44 is patentable over Keene based on its own merits. Specifically, the Applicant submits that Keene merely discloses the selection of different time delays. Therefore, Keene discloses the selection of a finite number of

delays, since Keene discloses changing the delays by changing the physical direction and paths over which light travels. On the other hand, Claim 44 recites "wherein the controllable time delay of at least one output optical pulse stream is controllable over a continuous range of optical delays." Hence, the Applicant submits that Claim 44 is patentable over Keene based on its own merits.

### **Conclusion**

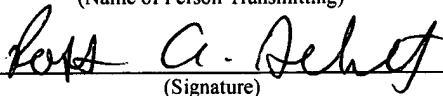
For the reasons set forth above, the Applicant respectfully requests that the Examiner withdraw the rejections of Claims 1 - 6 and 23. The Applicant further notes that Claims 31 - 43 are allowed and Claims 7 - 22 and 24 - 30 are allowable. Finally, the Applicant submits that new Claim 44 is allowable for the reasons presented above. In view of the above, reconsideration and allowance of all claims of the application are respectfully solicited.

The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account no. 12-0415. In particular, if this response is not timely filed, the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136(a) requesting an extension of time of the number of months necessary to make this response timely filed and the petition fee due in connection therewith may be charged to deposit account no. 12-0415.

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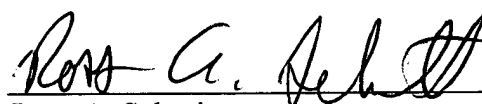
October 31, 2003  
(Date of Transmission)

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